UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,379	12/06/2005	Nicolas Delorme	280952US2PCT	2886

22850 7590 11/17/2006

C. IRVIN MCCLELLAND
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
HE, AMY	

ART UNIT	PAPER NUMBER
2858	

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/559,379	DELORME ET AL.	
	Examiner	Art Unit	
	Amy He	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 6* is/are rejected.

7)☒ Claim(s) *4 and 5* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/6/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The abstract of the disclosure is objected to because it contains informality legal phrases "comprising" "comprises" and "means". Correction is required. See MPEP § 608.01(b).

Claim Objections

2. Claims 2 and 3 are objected to because of the following informalities:

(1) In claim 2, the reference character I (on line 2) appears to be a typo. Replace "I" with --I_1--.

(2) In claim 3, "the second plate" (on line 2) appears to be a typo. Replace "the second plate" with --the first plate--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee (U. S. Patent No. 5, 343, 766).

As for claim 1, Lee discloses a capacitive sensor (capacitive accelerometer in Figure 1) including at least one measuring capacitor (8) having a first plate (14) and a second plate (12 or 10) of which at least one plate (10) is a mobile plate capable of

moving with respect to a rest position when, in a measuring phase, a measuring voltage (V) is applied between the first and second plates (12, 14, 10), characterized in that it includes means for applying, simultaneously to the measuring voltage, between the first and second plates, an actuation voltage (bias voltage, abstract, line 16) capable of bringing the first and second plates to a position substantially equal to the rest position (see abstract).

As for claim 6, Lee discloses a measuring method with the help of a capacitive sensor (capacitive accelerometer in Figure 1) including at least one measuring capacitor (8) having a first plate (14) and a second plate (12 or 10) of which at least one plate (10) is a mobile plate capable of moving, with respect to a rest position, when a measuring voltage (V) is applied between the first and second plates, characterized in that It includes, simultaneously to the application of a measuring voltage (V) between the first and second plates (12, 14, 10), the application of an actuation voltage (bias voltage, abstract, line 16) capable of bringing the first and second plates to a position substantially equal to the rest position(see abstract).

As for claim 2, Lee discloses that the means (18, 20 and 22) for simultaneously applying, in a measuring phase, a measuring voltage and an actuation voltage include:

a first switch (20) having a first terminal connected to the first plate (14) of the measuring capacitor and a second terminal connected to a first voltage (ground), which first switch (20) is controlled by a first clock signal (Ph1), and

a second switch (22) having a first terminal connected to the second plate (12) of the measuring capacitor (8) and a second terminal connected to a first operation voltage vp1 (Vb in Figure 1), so that: vp1 = Vdd + Va

where Va is the actuation voltage (bias voltage, abstract, line 16) and Vdd is a second voltage, which second switch (22) is controlled by a second additional clock signal (Ph2) that does not overlap with the first clock signal (col. 2, lines 65-68), and

a third switch (18) having a first terminal connected to the second plate (12) of the measuring capacitor (8) and a second terminal connected to a second operation voltage(V in Figure 1) so that the second operation voltage is written: Vp2 = Vref + Va, where Vref is a reference voltage, which third switch (18) is controlled by the first clock signal (Ph1).

As for claim 3, Lee discloses that the first plate (14) of the measuring capacitor (8) is connected to the first terminal of a fourth switch (24) of which the second terminal is connected to the inverting input (-) of an operational amplifier (42 or 26) of which the supply voltage is the voltage Vdd and of which the non-inverting input (+) is connected to the reference voltage Vref (Vi, Vs), wherein the fourth switch (24) is controlled by the second clock signal (Ph2), a fifth switch (28) and a negative feedback capacitance (32) are mounted parallel between the inverting input (-) and the output of the operational amplifier (26), and the fifth switch (28) is controlled by the first clock signal (Ph1).

Allowable Subject Matter

4. Claims 4-5 are objected to as being dependent upon a rejected base claim (claim 1), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

Claims 4 is allowable because none of the prior art discloses a capacitive sensor including an insulation capacitor, a fourth switch controlled by the second clock signal has a first terminal connected to the first plate of the insulation capacitor; a fifth switch controlled by the first clock signal has a first terminal connected to the second plate of the insulation capacitor; the fourth and fifth switches have their second terminals connected to one another and to a first plate of a negative feedback capacitor, and in the combination as claimed.

Claim 5 is allowable because none of the prior art discloses a capacitive sensor including a fourth switch controlled by the second clock signal has a first terminal connected to the fist plate of the insulation capacitor; a fifth switch controlled by the first clock signal has a first terminal connected to the second plate of the insulation capacitor; the fourth and fifth switches have their second terminals connected to one another; and the specific connections for a sixth switch, a seventh switch, an eighth switch, and a ninth switch, and in the combination as claimed.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kawamoto et al. (U. S. Patent No. 5, 910, 781) discloses a capacitive angle detector and a capacitance difference detecting circuit for detecting a difference in capacitance between capacitors of the capacitive angle detector (see Figures 5a and 5b).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (571) 272-2230. The examiner can normally be reached on 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 571-272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AH
November 9, 2006.

ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800